

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Unlicensed Use of the 6 GHz Band)	ET Docket No. 18-295
)	
Expanding Flexible Use in Mid-Band)	GN Docket No. 17-183
Spectrum Between 3.7 and 24 GHz)	

COMMENTS OF ALTEROS, INC.

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SUMMARY

Alteros, an Audio-Technica company, was formed in 2016 and is dedicated to the research, development, and sales of innovative technology products with a special focus on the evolving RF landscape and to creating high-end wireless solutions for live audio production, broadcast studios, sporting events, and theater applications in the ever shrinking frequency spectrum. Alteros products capitalize on Audio-Technica's extensive research in ultra-wideband ("UWB") and RF technology and digital solutions to solve the most demanding technical problems.

Reliable wireless spectrum for production use has become extremely scarce and extremely valuable. Moreover, the Federal Communications Commission's ("FCC" or "Commission") existing Part 15 rules for unlicensed devices in the 5.925-7.125 GHz ("6 GHz") band have created a flurry of new innovation of UWB devices that can operate efficiently without causing interference to production or other licensed users in the band. Now the Commission proposes placing new unlicensed broadband devices in the last remaining location for production wireless, which stands to harm production and upend the UWB's growing success.

In response to the FCC's *Notice of Proposed Rulemaking* soliciting feedback on proposed rules that would permit unlicensed use in portions of the 1200 megahertz of spectrum in the 6 GHz band, Alteros urges the Commission not to adopt its proposed rules in the NPRM that would undermine the Commission's stated goal of coexistence. Instead, Alteros urges the Commission to (1) allow new unlicensed broadband authorizations only in the 5.925 – 6.1 GHz portion of the 6 GHz band with an out-of-band emissions ("OOBE") limit of -61 dBm/MHz or alternatively (2) restrict the duty cycle of each 6 GHz transmitter to 0.5% over a period of 1 second, and specify significantly reduced power levels. In either case, the Commission should additionally require any new unlicensed broadband devices capable of operating above 6 GHz to include detect-and-avoid capability via both a central Automated Frequency Coordination ("AFC") system and a registered beacon fence.

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COMMENTS OF ALTEROS, INC.

Alteros, Inc. (“Alteros”) respectfully submits these comments in response to the above-captioned Federal Communications Commission (“FCC” or “Commission”) *Notice of Proposed Rulemaking* soliciting feedback on proposed rules that would permit unlicensed use in portions of the 1200 megahertz of spectrum in the 5.925-7.125 GHz (“6 GHz”) band.¹ Regarding incumbent unlicensed ultra-wideband (“UWB”) systems in the 6 GHz band, the Commission expects such systems “will continue to coexist with all other systems, *both licensed and unlicensed*, within the 6 GHz band.”² Though Alteros supports a smart and efficient shared spectrum arrangement to accommodate the “explosive demand” for unlicensed spectrum for Internet of Things (“IoT”) and other wireless broadband uses within the 6 GHz, the rules proposed in the NPRM fall far short of this objective while also ignoring the proliferation of unlicensed Part 15 devices that are already enhancing the lives of millions of Americans. New unlicensed devices that may be permitted to operate in the 6 GHz band under unnecessarily permissive and spectrally inefficient rules would not just adversely affect existing operations, but

¹ *Unlicensed Use of the 6 GHz Band, Expanding Flexible Use in Mid-Band Spectrum between 3.7 and 24 GHz*, ET Docket No. 18-295, GN Docket No. 17-183, Notice of Proposed Rulemaking, FCC 18-147 (rel. October 24, 2018) (“NPRM”).

² NPRM at ¶72 (emphasis added).

also harm a robust and rapidly growing segment of the band that sustains billions of dollars in economic value as well as invaluable public interest and public safety purposes. As requested in the NPRM, Alteros suggests specific rules and mitigation strategies that would minimize this risk.

I. BACKGROUND

a. Alteros

Alteros, an Audio-Technica company, was formed in 2016 and is dedicated to the research, development, and sales of innovative technology products with a special focus on the evolving RF landscape and to creating high-end wireless solutions for live audio production, broadcast studios, sporting events, and theater applications in the ever shrinking frequency spectrum. Alteros products capitalize on Audio-Technica's extensive research in UWB and RF technology and digital solutions to solve the most demanding technical problems. As spectrum for high profile events has become more and more compromised, Alteros was formed in response to the FCC's desire to develop technology solutions that will allow wireless microphones and other broadcast auxiliary services, both licensed and unlicensed, to successfully operate outside of the television bands without disrupting existing licensed services. To this end, Audio-Technica invested millions of dollars in the research, development, production, and launch of the world's first ultra-wideband digital wireless microphone system and then followed this innovation with the formation of Alteros as a new company. Within a year Alteros began winning awards and recognition for designing and providing technically-advanced digital wireless products used in the highest level venues and most critical performance applications, including the April 2018 National Broadcasters Association (NAB) Show where Alteros won "Best of NAB" and two "Best of Show" awards. Today, Alteros systems support not only major

entertainment and sports endeavors such as the [U.S. Open Tennis Championship](#)³ or the [ESPN production expansion](#) at its new Seaport Studios in Manhattan,⁴ but also theaters and public venues around the country.⁵ Our product is used on-air, every day, for consumption by over 100 million viewers per month. We provide a viable solution to traditional frequency-coordinated wireless by freeing as much as 30 MHz of coordinated spectrum in a single location.

Prior to the formation of Alteros, Audio-Technica cooperated with the Commission in its 700 MHz and 600 MHz reallocation proceedings to allow unlicensed devices to operate within the television white spaces⁶ and establish rules to ensure that such coexisting operations would not interfere with licensed users. In 2015, the Commission concluded a wireless microphone proceeding aimed specifically at accommodating the *long-term needs* of licensed and unlicensed

³ The U.S. Open is estimated by Forbes to be a \$350 million business. See “How The U.S. Open Became A \$350 Million Business,” Grace Minassian, Forbes (August 10, 2018) *available at* <https://www.forbes.com/feature/usopen/#624819c613d8>.

⁴ According to a Grand View Research report summary, sporting events is the fastest growing wireless microphone segment with a compound annual growth rate of 7.8% forecasted from 2018-2025, and this growth from sports events has surged microphone product demand for other purposes (e.g., announcements, commentary, speeches). See “Wireless Microphone Market Analysis By Type (Handheld, Clip-on), By Technology (Wi-Fi Band, Radio Frequency Channel, Radio Frequency Band), By End-use, By Region, And Segment Forecasts, 2018 – 2025, Grand View Research (October 2017), *available at* <https://www.grandviewresearch.com/industry-analysis/wireless-microphone-market>.

⁵ The FCC’s decisions to re-home wireless microphones are costly not only to the industry but also to schools, local theaters, churches, and community organizations that rely on the technology. See “How an auction for a wireless frequency is affecting high school and amateur theaters,” David Brancaccio, Marketplace (August 28, 2018), *available at* <https://www.marketplace.org/2018/08/28/life/how-high-school-theaters-are-affected-when-fcc-sells-broadcast-waves>.

⁶ *Revisions to Rules to Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band et al.*, WT Docket No. 08-166 et al., Report and Order and Further Notice of Proposed Rulemaking, FCC 10-16 (rel. January 15, 2010) and *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268, Report and Order, FCC 14-50 (rel. June 2, 2014).

wireless microphone users.⁷ Besides providing Part 74 licensed users spectrum for protected operations in 25 megahertz on either side of 7 GHz, the Commission expressly encouraged developments for wireless microphone applications in other bands outside of the TV bands, particularly the unlicensed UWB between 3.1 and 10.6 GHz.⁸ It was in these circumstances that Alteros grew and became expert in developing spectrally efficient technologies in the 6 GHz band.

In April 2017, when the FCC’s broadcast incentive auction was completed, the FCC formalized a 39-month transition period ending July 13, 2020, after which the majority of 600 MHz spectrum would cease to be available to wireless microphones.⁹ Now, even before this transition period can expire, the Commission is once again contemplating further rule changes that would fundamentally alter the landscape for wireless microphones. This could hardly be described as “long-term.” Both manufacturers and end users reasonably relied on the Commission’s directives and policies on long-term solutions for wireless microphone operation and once again they will suffer the expense and reduced capability of loss of spectrum. After twice being forced to migrate; from 700 MHz band and again from 600 MHz, Alteros and other manufacturers of wireless production equipment have innovated and developed successful products that operate in the 6 – 7 GHz spectrum that bring life to significant advances in content production, and offset the severe operational difficulties presented by loss of UHF spectrum.

⁷ Promoting Spectrum Access for Wireless Microphone Operations, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Report and Order, FCC 15-100, ¶1 (rel. August 11, 2015) (“Wireless Microphone Order”).

⁸ Wireless Microphone Order at ¶136. (“While we did not propose, nor are we adopting any changes to [the Commission’s UWB] rules, we do encourage further developments that can enable various wireless microphone applications to meet particular consumers’ needs”).

⁹ Moreover, wireless microphone operations are required to cease even earlier than 2020 if such operations were found to cause harmful interference to any 600 MHz service licensee’s operations.

During the same time period, innovations and advanced developments in UWB technology allowed new and exciting commercial and consumer applications to germinate. It takes time to innovate, and these advanced devices are just now beginning to thrive. They are now driving rapid economic growth and serving critical industries that promote economic growth and benefit the public interest. Allowing flourishing wireless operations to be needlessly disrupted by overly permissive and one-sided rules would be not only anathema to the Commission's goals in the instant proceeding, but also would run counter to the public interest, convenience, and necessity. Alteros does not oppose allowing additional unlicensed operations in the 6 GHz mid-band with sufficient measures to ensure mutual coexistence among new and incumbent unlicensed operators. However, in no event should the Commission adopt rules to arbitrarily favor one class of unlicensed wireless users over another, particularly when incumbent UWB operators such as Alteros have established a strong and rapidly growing presence in the band.

b. Wireless Microphones, Wireless Production and UWB

In the NPRM, the Commission offhandedly notes that “some existing unlicensed users and manufacturers have expressed concern that adding new types of unlicensed devices and use cases to the 6 GHz band could detrimentally change the overall RF environment in which they operate.”¹⁰ Here, the Commission vastly understates the potential impact of its proposed rules not only on UWB users and manufacturers within the 6 GHz band but on the industries and consumers that rely on this spectrum on a daily basis.

Reliable wireless spectrum for production use has become extremely scarce and extremely valuable. Certain uses, such as electronic news-gathering (or ENG), are critical yet subject to unpredictable conditions in the spectrum. The promised 25 MHz on either side of 7

¹⁰ NPRM at ¶72

GHz for Part 74 microphone use is an important tool for providing predictable and acceptable operating spectrum. The power levels and real-time operational characteristics of wireless microphones do not allow operation on or near a broadband unlicensed signal such as proposed in this NPRM. Years of experience have educated professional wireless microphone users as to what conditions result in acceptable performance and what conditions result in interference. WiFi devices in the 2.4 and 5 GHz ranges are interfering with professional wireless production gear at every event. Indeed, this is one reason why despite desperate need for more products, only mid-level wireless microphones have been developed to operate in these bands. It is not possible to obtain the necessary performance characteristics.

As a side effect of the spectrum crunch, wireless production and coordination professionals have begun “purpose defining” available gear and frequency bands in a voluntary, shared coordination effort. Coordinators are placing critical or “money” mics in what little remains of the UHF spectrum. The situation has become so hostile that these high-profile critical performers are being mic’ed with double and quadruple occupied bandwidth and even proposed full 6 MHz bandwidth for a single or few users in order to maintain quality of service. Less real-time demanding operations have been moved. Those include additional wireless production such as COMMS or IFBs and wireless cameras. In order to properly coordinate and share the little spectrum that is left for operating production wireless, a number of 6-7 GHz cameras and devices have evolved out of necessity. These production devices have already been forced to move up into the 6 GHz band after experiencing interference in the current WiFi bands. Placing new unlicensed broadband devices on top of the last remaining location for production wireless will have catastrophically negative effects on production. There is nowhere else for these devices to

go. Conversely, a number of higher bands are proven effective and available for unlicensed broadband.

The FCC's last ruling for Part 15 unlicensed devices operating in the 6-7 GHz band promoted a flurry of innovation and devices that are proven to exist without creating any interference to production (or other licensed users) of this band. The range of professional, commercial and consumer UWB applications and devices runs the gamut.¹¹ Besides wireless professional audio equipment and microphones from Alteros, these include health monitors (e.g., pulse monitoring and sleep apnea), fall monitoring, automotive radar ranging systems, bus and train control and communications, universal IoT remote controls, tank level radar sensing, stock animal health and tracking, and sports tracking (e.g., National Football League, National Hockey League), among many others. These UWB devices are especially beneficial to professionals and consumers alike due to their low-power, high device density, high-bandwidth, high-precision, low-latency, immunity to multi-path, security and real-time transmission capabilities. In fact, UWB is uniquely suited as the best technology to meet the needs of the rapidly accelerating IoT demand. For professional audio equipment and wireless microphones in particular, super low latency and real-time performance are essential, and UWB exactly delivers those capabilities. Professional UWB wireless microphone systems have proven to operate with the highest level of performance in even the harshest RF environments. They carry an added benefit of off-loading spectrum demand. By utilizing 24 channels of continuous-carrier free wireless audio at power levels below -41 dBm, over 7.2 MHz of spectrum is freed for the use of other devices which still require coordination in the crowded spaces. High channel count users

¹¹ Alteros is a founding member of the [UWB Alliance](#), whose varied membership includes innovation leaders such as Zebra, Bosch, Decawave, Denso, Hyundai, iRobot, Kia, Novelda, Ubisense and Xethru.

effectively gain over a full TV channel of bandwidth when they off-load wireless mics to our system. Considering the extreme value of every MHz of spectrum, this makes the use of this technology extremely relevant and valuable. It should not be displaced or compromised.

It is clear that hundreds of millions of dollars have successfully been invested in the innovative development and use of UWB devices and millions of consumers already benefit from products and services operating in the 6 GHz bands as a result of the Commission's efficient spectrum sharing policies and Part 15 rules with low UWB operational limits that have been in place since adopted in 2004 and amended in 2010.¹²

The Commission's own Part 15 equipment authorization records highlight the rapidly growing proliferation of UWB devices. Between January 2013 and May 7, 2018 there were 72 new equipment authorizations in the 6.0 – 7.2 GHz range, with 63 percent of these authorizations for UWB technology. A revised search between January 2013 and February 15, 2019, an extension of only 9 months, shows 106 new equipment authorizations in the 6.0 - 7.2 GHz range and 65% authorizations for UWB technology. In these 9 months, the number of UWB device authorizations in the 6.0 - 7.2 GHz band increased from 45 to 69 approvals, a 53% increase. This is proof that the FCC's previous rulemaking for unlicensed devices operating in the 6.0 – 7.2 GHz band is actually working and commercially / economically important. This is also proof that UWB device adoption has germinated and is now rapidly accelerating, with a 53% increase in authorizations in just the last 9 months. Even Apple has a demonstrated interest in UWB technology with U.S. Patent No. 10,171,129 issuing in January 2019 for a "pulse shaping

¹² See generally *Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems*, ET Docket No. 98-153, FCC 04-285 (rel. December 14, 2004) and *Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, Third Memorandum Opinion and Order and Memorandum Opinion and Order*, FCC 10-151 (rel. August 11, 2010).

interoperability protocol for ultra wideband systems,” further tying UWB with future consumer devices. UWB operations have been thriving and growing in the 6 GHz band by sharing this spectrum in a balanced fashion and complying with existing Part 15 output power requirements. These operations work notwithstanding operations by the band’s many other occupants (e.g., point-to-point microwave links; medical devices; asset tag and location tracking; and satellite operations). In order to continue sharing and successfully coexisting with all other systems, both licensed and unlicensed, the Commission must adopt an operation framework that is carefully crafted to protect UWB and all significant and critical incumbent operations in the 6 GHz bands.

II. DISCUSSION

The Commission should not adopt the rules proposed in the NPRM. Based on its firsthand experience with and knowledge of the technical advantages, limitations, and operating requirements of the 6 GHz band, Alteros finds that the technical assumptions, descriptions and performance applications described in the NPRM lack a sound technical basis, particularly the erroneous assumption that the WiFi devices as described would be able to coexist with existing Part 15 devices and operate without interference to incumbent users.

In order to achieve the Commission’s goal of coexistence within the 6 GHz band, Alteros urges the Commission to allow new unlicensed broadband authorizations only in the 5.925 – 6.1 GHz portion of the 6 GHz band with an out-of-band emissions (“OOBE”) limit of -61 dBm/MHz. Alternatively, the Commission should restrict the duty cycle of each 6 GHz transmitter to 0.5% over a period of 1 second, and specify significantly reduced power levels. The power levels of current wireless broadband devices were set based upon spectrum which was not already under heavy use, and are inappropriate for this proceeding. The FCC should require a formal study to determine an appropriate power level such that aggregate power of

wireless broadband devices will be comparable and compatible with the power levels of the already existing 6 GHz part 15 devices. As already proven, maintaining lower power levels is beneficial to the optimized performance and device density needed for a “rapid explosion” of users, no matter the RF method.

In addition and in either case, the Commission should require any new unlicensed broadband devices capable of operating above 6 GHz to include detect-and-avoid capability via both a central Automated Frequency Coordination (“AFC”) system and a registered beacon fence.

a. Sharing 6 GHz Spectrum Is Possible with New Unlicensed Broadband Operations in the 5.925-6.1 GHz Portion of the Band and a -61 dBm OOB Limit.

Coexistence among new and incumbent 6 GHz inhabitants would be possible if the FCC were to (1) keep new unlicensed broadband operations in the 5.925-6.1 GHz portion of the 6 GHz band and (2) impose a -61 dBm OOB limit. As a threshold matter, this 175 megahertz allocation would satisfy the Congressional mandate to open additional spectrum for wireless broadband in the MOBILE NOW Act under Title VI of RAY BAUM’S Act,¹³ including 100 megahertz below 8000 megahertz for unlicensed use and at least 55 megahertz below 8000 megahertz for licensed or unlicensed use.¹⁴ To the extent more spectrum is needed or desired to offload commercial wireless network traffic, then the Commission may wish to consider millimeter wave spectrum where incumbent services are more absent and larger amounts of spectrum operating over wider bandwidths would be more optimal for performance (e.g., for

¹³ See Consolidated Appropriations Act, 2018, P.L. 115-141, Division P, the Repack Airwaves Yielding Better Access for Users of Modern Services (RAY BAUM’S) Act. Title VI of the RAY BAUM’S Act is the Making Opportunities for Broadband Investment and Limiting Excessive and Needless Obstacles to Wireless Act or MOBILE NOW Act (Act). *Id.*

¹⁴ *Id.* § 603(a)(2).

streaming 4K or 8K video signals). Moreover, millimeter wave spectrum would be better suited in terms of global harmonization and handset integration, particularly if 60 GHz WiGig is there. In that case, economies of scale may be further appealing.

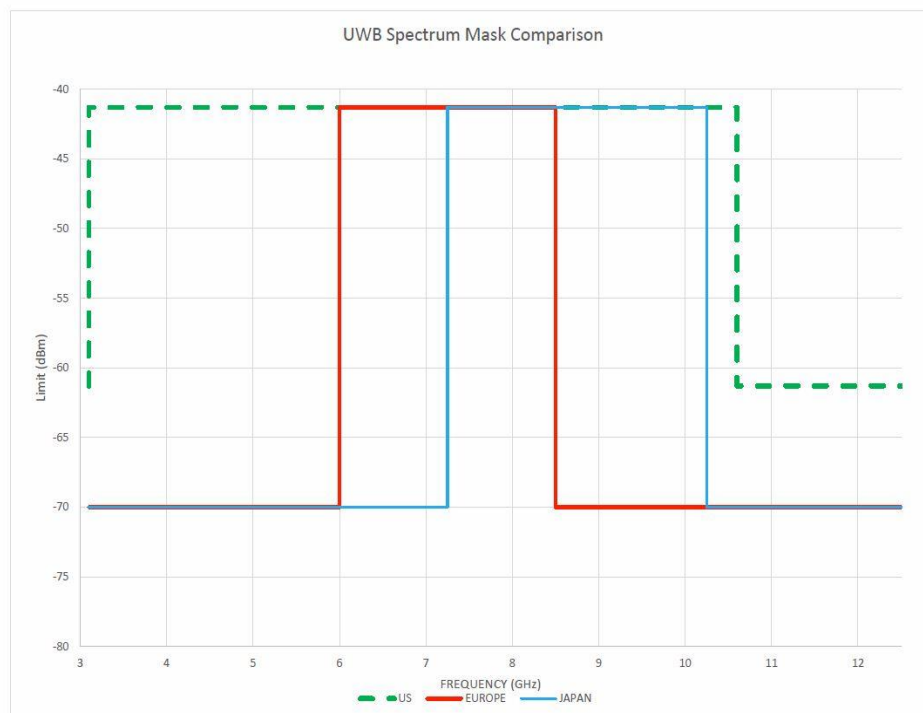
Regarding the OOB limit, the NPRM's proposal of an EIRP of -27 dBm/MHz¹⁵ is higher than the mean UWB transmit power, which makes coexistence impossible across all bands. This proposed limit is especially untenable given that wireless microphones—which operate at a far lower power than WiFi devices and with fewer devices in the market—were required to maintain an OOB of -90dB dB in order not to prevent interference with LTE.¹⁶ Also, in the 2015 Wireless Microphone Report and Order, the FCC expressed such concern over possible interference from the new rules for wireless microphones operating on either side of 7 GHz to existing services in this band, that they also limited these out of band emissions to -90 dB. These devices and services are still in operation. Even -61 dBm would seem to conflict with the previously set levels.¹⁸ Though the Commission believes its proposed -27 dBm is acceptable because that is consistent with limits for existing U-NII bands, these current 802.11 OOB specifications already result in significant interference to licensed users at large events and venues such as concerts and sports stadiums. Also, the rules regarding previous U-NII operation were developed based upon more lightly utilized spectrum. The FCC has acknowledged a

¹⁵ NPRM at ¶82.

¹⁶ Wireless Microphone Order at 14 (While many wireless microphone manufacturers explain that they are already committed to harnessing technological advances in this area, we reiterate the importance of improved spectral efficiency, spectrum sharing, and flexibility. We expect wireless microphone manufacturers to continue to take advantage of technological advances to promote more efficient use of spectrum available for wireless microphone operations. To further promote efficient use, we also are taking the step of adopting the more efficient ETSI standards for wireless microphones in several bands, as discussed below. We also anticipate that future technological advances will enable wireless microphones to more effectively share the available spectrum resource...).

¹⁸ Wireless Microphone Order at ¶131.

number of times that the 6-7 GHz spectrum is already well occupied. In the previous UWB ruling, a tight spectrum mask of -61 dBm was highly studied, examined and specified as the appropriate safe level for OOB from outside this spectrum and should be maintained. As a benefit, this specification would both serve as a key technical tool for maximizing capacity and band sharing, and will also result in devices that are more spectrally efficient and perform better allowing more capacity to handle requirements as devices density demands increase.



b. Alternatively, Sharing the 6 GHz Band Would Be Possible by Restricting the Duty Cycle to 0.5% over 1 s and Conducting Further Analyses.

As an alternative to limiting available bandwidth and a stricter OOB limit, the Commission could adopt a duty cycle limit of 0.5% over a period of 1 second, which was set forth in the RKF Technical Study submitted on the record.¹⁷ Duty cycle is an accepted international method for mitigating device interference. This limitation would have the added

¹⁷ Apple, Broadcom, et al. Jan. 25, 2018 *Ex Parte* ([RKF Technical Study](#)).

benefit of providing additional co-existence assurance for all devices should extreme aggregation occur in the future.

The Commission should assess, determine and specify the appropriate power levels for this band with as much care and diligence as was undertaken with the previous Part 15 unlicensed device rule-making for UWB operation. Lower power levels will yield more capacity given the high demand for the band, and help new devices comply with the Part 15 unlicensed mandate to not cause interference. The Commission also should consider how lower power operation would benefit WiFi as well as existing devices. At these 6 GHz frequencies, reflections and multipath are different and more pronounced than at 5.8 GHz, which in turn is worse than at 2.4 GHz. The higher the power, the worse the multipath effect. Spectrum pollution and self-interference will be unwanted consequences. As increasingly fast throughputs are added (e.g., for video streaming), the signals will be too strong and too fast to address/correct for multipath issues.

c. The Commission Should Adopt an AFC with a Beacon Fence.

Alteros agrees with the FCC's suggestion to create an AFC for controlling transmission of the new unlicensed broadband devices. Alteros also urges the Commission to create an AFC that should operate everywhere across the 6 GHz band and to which all access points everywhere will be required to connect. Client devices must receive permission to operate from an access point (high power and low power) and, based upon location, the operation would either be made available or not. However, we also recognize and agree with the concern the commission has expressed for the inability of AFC to effectively manage mobile devices. In order to overcome the current operational difficulties associated with database methods, and to address the need for a more robust and reliable method to account for various location-based contours and

propagation variations, the Commission should go further in requiring detect-and-avoid capability for all new unlicensed broadband devices which can operate above 6 GHz based upon detection of a registered beacon fence signal

To protect commercial, broadcast and critical community and safety operations that already are highly dependent upon equipment operating in the 6 GHz band, the Commission should adopt a rule implementing an RF-based, registered “beacon fence” that, when deployed, broadcasts a signal informing access points/routers and other devices that a 6 GHz signal is not available to turn on within a certain range. Those access points/routers/devices would then deny a mobile or client device permission to use the 6 GHz signal upon sensing the beacon fence. The beacon fence would rely on currently existing communications and control methods and not on a 6 GHz WiFi channel.

A beacon fence generally can be implemented without additional cost or complexity. WiFi already has a control channel built in to its communications capabilities, whereas client devices already listen before transmitting and already are able to receive commands from access points. A beacon fence transmission follows similar or same RF propagation physics that the protected signal follows. Accordingly, the beacon fence system would allow for maximum spectrum usage in real time and would be based on the specific needs and requirements of end users location and situation. A beacon fence would only be deployed when other licensed and unlicensed devices that may be subject to 6 GHz WiFi interference are being used by a registered and qualified end user (e.g., commercial factory/production facility, local government, broadcaster or other type of Part 74 licensed user). Each device will be known and individually registered to a qualified user. This dynamic solution would be more efficient and effective than a static and pervasive regulatory policy that predetermines which technology is more applicable to

a given situation. FCC type-approval and compliance requirements would be applicable and enforced through required registration of the device, and responsible party.

III. CONCLUSION

Based on the foregoing, Alteros strongly urges the Commission not to adopt its proposed rules for new unlicensed devices in the 6 GHz band and instead consider the options recommended in this filing. Alteros looks forward to working with Commissioners and staff in this proceeding.

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